WHAT IS CLAIMED IS:

1. A light receiving element for converting a light signal into an electric signal, comprising:

a semiconductor substrate;

a semiconductor layer;; and

a photo-absorption layer interposed between the semiconductor substrate and the semiconductor layer, the semiconductor substrate comprises:

a first groove having an inclination with respect to an incidence plane of the light signal so that the light signal can be refracted when the light signal has been incident on the first groove; and

a second groove for reflecting the light signal refracted by the first groove to be absorbed into the photo-absorption layer, so that a vertical-incidence drift of the light signal toward the photo-absorption layer is minimized.

2. The light receiving element of claim 1, wherein the semiconductor substrate is made from a semiconductor material in which a specific crystalline direction is etched slowly, so that the semiconductor substrate has an inclined profile after being wet-etched.

3. The light receiving element of claim 2, wherein the semiconductor substrate exposes (111) plane after being etched by a wet solution.

4. The light receiving element of claim 3, wherein the semiconductor substrate is made from one of a group Ⅵ, a group Ⅱ-Ⅵ, and a group Ⅲ-Ⅴ semiconductor substrate.

5. The light receiving element of claim 1, wherein the first groove and the second groove are formed to have a slant angle of 50° to 60° relative to a horizontal orientation.

6. The light receiving element of claim 1, wherein the first groove and the second groove have a 'U' shape or a 'V' shape.

7. The light receiving element of claim 1, wherein the first groove further comprises an anti-reflective coating layer so that the light signal is refracted without a reflection when the light signal is incident thereto.

8. The light receiving element of claim 7, wherein the anti-reflective coating layer is a deposited film formed by a chemical vapor deposition process or a physical vapor deposition process.

9. The light receiving element of claim 1, wherein the second groove further comprises a total reflection layer.

10. The light receiving element of claim 9, wherein the total reflection layer is made from a metal layer having a thickness substantially greater than the skin depth of the metal layer.

11. The light receiving element of claim 10, further comprising a dielectric film formed between the semiconductor substrate and the metal layer.

12. The light receiving element of claim 1, wherein the semiconductor substrate has a higher energy band gap than that of the light signal.

13. The light receiving element of claim 1, wherein the light receiving element further includes:

a first electrode formed on the semiconductor layer; and

a second electrode formed on a portion of a rear surface of the semiconductor substrate.

14. A method of manufacturing a light receiving element, the method comprising the steps of:

growing a first semiconductor layer, a photo-absorption layer, and a second semiconductor layer on a semiconductor substrate of a first conduction type in sequence, each of the first semiconductor layer and the second semiconductor layer having the same conduction type as that of the first semiconductor layer;

selectively converting the second semiconductor layer from the first conduction type to a second conduction type by diffusing impurities; and

forming a first groove and a second groove by wet-etching the semiconductor substrate.

15. The method of claim 14, wherein the semiconductor substrate is one of a group Ⅵ, a group Ⅱ-Ⅵ, and a group Ⅲ-Ⅴ semiconductor substrate, the semiconductor substrate being made from a semiconductor material in which a specific crystalline direction is etched slowly, so that the semiconductor substrate has an inclined profile after being wet-etched.

16. The method of claim 15, wherein the semiconductor substrate is one of an InP substrate, a silicon substrate, and a GaAs substrate.

17. The method of claim 16, wherein an etching solution for forming the first groove and the second groove is capable of exposing the (111) plane of the semiconductor substrate.

18. The method of claim 14, further comprising a step of forming an anti-reflective coating layer on the first groove.

19. The method of claim 18, wherein the anti-reflective coating layer is formed by a chemical vapor deposition process or a physical vapor deposition process.

20. The method of claim 14, further comprising a step of forming a total reflection layer made from metal materials on the second groove.

21. The method of claim 20, wherein the metal layer is formed have a thickness substantially greater than that of its skin depth.

22. The method of claim 20, further comprising a step of forming a dielectric film between the semiconductor substrate and the metal layer.

23. The method of claim 14, further comprising steps of:

forming an electrode of a second conduction type on the second semiconductor layer of the second conduction type; and

forming an electrode of a first conduction type on a portion of a rear surface of the semiconductor substrate.